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herein, but are to be accorded the full scope consistent with the language claims, wherein reference to an element in the singular is not intended to mean “one and only one” unless specifically so stated, but rather “one or more.” Unless specifically stated otherwise, the term “some” refers to one or more. Pronouns in the masculine (e.g., his) include the feminine and neuter gender (e.g., her and its) and vice versa. Headings and subheadings, if any, are used for convenience only and do not limit the subject disclosure.

A phrase such as an “aspect” does not imply that such aspect is essential to the subject technology or that such aspect applies to all configurations of the subject technology. A disclosure relating to an aspect may apply to all configurations, or one or more configurations. A phrase such as an aspect may refer to one or more aspects and vice versa. A phrase such as a “configuration” does not imply that such configuration is essential to the subject technology or that such configuration applies to all configurations of the subject technology. A disclosure relating to a configuration may apply to all configurations, or one or more configurations. A phrase such as a configuration may refer to one or more configurations and vice versa.

What is claimed is:

1. An access system for a wireless local area network, the system comprising:

one or more processors; and

a machine-readable medium comprising instructions stored therein, which when executed by the one or more processors, cause the one or more processors to perform operations comprising:

initiating operation in a first frequency band of a plurality of frequency bands of the wireless local area network to provide one or more wireless client devices of the wireless local area network with access to a wireless wide area network;

processing one or more association requests received in the first frequency band to identify one or more associated wireless client devices of the one or more wireless client devices;

determining whether each of the one or more associated wireless client devices supports a second frequency band of the plurality of frequency bands, the second frequency band having a different frequency than the first frequency band, wherein determining whether each of the one or more associated wireless client devices supports the second frequency band comprises determining whether the one or more associated wireless client devices previously associated to the access system and operated in the second frequency band while associated to the access system; and

sending a request to the one or more associated wireless client devices to transition from the first frequency band to the second frequency band based on determining that each of the one or more associated wireless client devices supports the second frequency band.

2. The access system of claim 1, wherein initiating operation in the first frequency band comprises selecting a first frequency channel in the first frequency band based on one or more scans of data traffic across different frequency channels of the first frequency band.

3. The access system of claim 1, wherein determining whether each of the one or more associated wireless client devices supports the second frequency band comprises:

receiving one or more values in a capability field of each of the one or more associated wireless client devices.

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4. The access system of claim 1, wherein the operations further comprise:

obtaining a signal strength measurement from each of the one or more associated wireless client devices; and

determining whether the signal strength measurement obtained from each of the one or more associated wireless client devices exceeds a predetermined received signal strength threshold,

wherein sending the request to the one or more associated wireless client devices to transition from the first frequency band to the second frequency band is further based on determining that the signal strength measurement obtained from each of the one or more associated wireless client devices exceeds the predetermined received signal strength threshold.

5. The access system of claim 4, wherein the signal strength measurement received from each of the one or more associated wireless client devices is a received signal strength indicator (RSSI) measurement.

6. The access system of claim 4, wherein the signal strength measurement received from each of the one or more associated wireless client devices is a received channel power indicator (RCPI) measurement.

7. The access system of claim 1, wherein the request is sent by the access system when there is a lull in data transmission between each of the one or more associated wireless client devices and the access system.

8. The access system of claim 1, wherein the operations further comprise:

transitioning, by the access system, from the second frequency band to the first frequency band when there is a lull in data transmission between each of the one or more associated wireless client devices and the access system;

identifying one or more other wireless client devices operating in the first frequency band that are requesting to join the wireless local area network;

determining whether the one or more other wireless client devices operating in the first frequency band operate exclusively in the first frequency band;

transitioning, by the access system, from the first frequency band to the second frequency band; and

sending a request to the one or more associated wireless client devices operating in the second frequency band to transition from the second frequency band to the first frequency band when the one or more other wireless client devices were determined to operate exclusively in the first frequency band.

9. The access system of claim 1, wherein determining whether each of the one or more associated wireless client devices supports the second frequency band is performed a predetermined fixed amount of time after initiating operation in the first frequency band.

10. The access system of claim 1, wherein the first frequency band is a 2.4 GHz frequency band, wherein the second frequency band is a 5 GHz frequency band.

11. The access system of claim 1, wherein the operations further comprise:

identifying an additional associated wireless client device failing to advertise whether the additional associated wireless client device supports the second frequency band;

transitioning, by the access system, from the first frequency band to the second frequency band;

subsequently determining whether the additional associated wireless client device successfully connected to a channel in the second frequency band; and